

Stereoscopic Topographic Map Synthesized from Digital Elevation Model

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A new method for visualizing topographic maps in a 3-dimensional mode, called digital stereoscopic topographic map (DSTM), was developed. By referring to digital elevation model, parallax difference at each pixel of DSTM is adjusted to a specified scale and E-H ratio (ratio between elevation and horizontal distance). One of the advantages of DSTM includes the distribution of thematic characteristics versus elevation in one image. For example, by a stereoscopic slope map, to which the DSTM is applied to a slope map of ground surface, we can interpret ground surface distribution versus elevation simultaneously. DSTM can be printed as anaglyph images to look conveniently, but also directly adopted to regular electronic 3D display devices. The other advantages and applications of DSTM will be introduced by our colleagues in the succeeding oral and poster sessions.

Keywords: Digital elevation model, Topographical feature, Digital stereoscopic topographic map